NTSB ID: NYC03LA107

Aircraft Registration Number: N208AD

Occurrence Date: 05/15/2003

Most Critical Injury: Minor

Occurrence Type: Accident

Investigated By: NTSB

Location/Time

Nearest City/Place	State	Zip Code	Local Time	Time Zone	
New Russia	ОН	44074	1710	EDT	
Airport Proximity: Off Airport/Airstrip	Distance From	m Landing Facility:	4.4	Direction Fro	m Airport: 260

Aircraft Information Summary

Aircraft Manufacturer	Model/Series	Type of Aircraft
Cessna	208B	Airplane

Sightseeing Flight: No Air Medical Transport Flight: No

Narrative

Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:

On May 15, 2003, about 1710 eastern daylight time, a Cessna 208B, N208AD, operated by DK&L Company LLC, Anderson, Indiana, was substantially damaged during a forced landing in New Russia, Ohio, after departure from Lorain County Regional Airport (LPR), Lorain/Elyria, Ohio. The certificated airline transport pilot received minor injuries. Visual meteorological conditions prevailed for the positioning flight destined for Anderson Municipal Airport-Darlington Field (AID), Anderson, Indiana. The flight was operated on an instrument flight rules (IFR) flight plan under 14 CFR Part 91.

According to the pilot, the accident flight was his third flight of the day. The first flight was a positioning flight from Anderson to Smith Field (SMD), Fort Wayne, Indiana. There, cargo was loaded onto the airplane, and subsequently flown to Lorain, where it was off-loaded. The pilot reported that he originally departed Anderson with 2,200 pounds of fuel onboard, and at Lorain, about 1,600 pounds remained, equally split between the two tanks. He did not request or obtain any fuel at Lorain, and departed about 1705. He established radio contact with Cleveland approach control and received his clearance while en route.

- At 1708:20, the controller cleared the flight to proceed direct to Anderson, Indiana, and to climb to 8,000 feet.
- At 1708:31, the pilot reported that he would like to return to the airport.
- At 1708:48, the controller advised the pilot of a low altitude alert, and questioned if he was returning to the airport.
- At 1708:56, the pilot replied that he was, after which radio contact was lost.

When interviewed, the pilot reported that before takeoff, both fuel selectors were ON, and he did not touch them or change their positions. The initial climb was conducted at 90 to 100 knots, with a 10 to 15 degree pitch attitude. He momentarily leveled at 2,200 feet, and sensed a decrease in engine torque. The low fuel pressure light illuminated, and the fuel flow was lower than normal. The pilot turned the boost pump and ignition ON, and there was no change in engine condition or fuel flow, and the low fuel pressure light remained illuminated. He then advanced the power lever to the full power position, and there was no response from the engine. The pilot heard what he thought was an engine noise, which he described as a decreasing sound. He set up for a forced landing in a field, and after the airplane came to rest, he switched off both fuel selectors. The pilot reported that he did not feather the propeller as he was too busy.

According to an inspector from the Federal Aviation Administration (FAA), the airplane came to rest near a residence, inverted. A witness observed the pilot exit the cockpit, and reported that he did not re-enter the airplane prior to being removed from the scene by an ambulance. The left wing

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Narrative (Continued)

was separated from the fuselage at the aft attach point. The fuselage was wrinkled and the vertical stabilizer and rudder were crushed.

In the cockpit, the left fuel selector was found in the OFF position, and the right fuel selector was found between ON and OFF. The power lever was full forward, and the safety wire on the emergency power lever was in place and secure.

The right wing was removed, and about 100 gallons of fuel, similar in sight, smell, and feel to Jet-A was drained from the wing. A large fuel spill was present near the left wing, and when the wing was moved, fuel drained from the wing.

Examination of the fuel line between the fuel selectors and the engine revealed trace fuel. The fuel filter mounted on the engine contained trace amounts of fuel. Rotation was obtained on the power turbine and compressor turbine with no binding.

According to the Pilot's Operating Handbook for the Cessna 208B, the electric fuel boost pump was designed to turn on automatically when the fuel pump selector switch was placed in the NORMAL position and a loss of fuel pressure was sensed in the system.

When electrical power was applied to the accident airplane, and with the fuel pump switch in the NORMAL position, the electric fuel pump rotated and pumped liquid.

The airplane was equipped with a fuel selector shutoff warning system, which consisted of two horns, labeled #1 and #2, and a red fuel shutoff warning light on the annunciator panel. The system operates in two modes, one during engine start, and the other, after engine start.

If one or both fuel tank selector was turned off and the engine starter engaged, both warning horns would sound, and the FUEL SELECT OFF light on the annunciator panel would illuminate.

After engine start with both fuel selectors turned off, the #1 warning horn will sound and the FUEL SELECT OFF light on the annunciator panel would illuminate. In addition, after engine start, with one fuel selector turned off, and the remaining fuel in the other tank is 25 gallons or less, the #1 horn would sound and the FUEL SELECT OFF light on the annunciator panel light would illuminate.

The warning light for FUEL SELECT OFF was popped out about 1/16 of an inch which disengaged both bulbs in the unit from illuminating. None of the other lights on the annunciator panel were found extended. When pushed in and engaged, the lights would have illuminated even if the pilot had only one fuel selector turned to the off position.

When the test feature of the accident airplane's warning system was activated, the FUEL SELECT OFF light illuminated; however, the #1 horn which was used for situations after engine start did not sound. In addition, when both fuel selectors were placed in other than the ON position, the FUEL SELECT OFF light illuminated, but the horn still did not sound.

The Fuel Selectors Off Warning System and the electrical continuity to the warning horn were checked and found to be operative. According to the party representative of Cessna Aircraft Co. the inoperative #1 horn was potted and sealed. He said that the horn was a non-repairable item, and discarded after failure. In addition, he also reported that there was sufficient fuel in the fuel system beyond the fuel selector valve for the airplane to takeoff and fly for a few miles prior to experiencing fuel exhaustion.

According to the checklist contained in the Cessna 208 Pilot's Operating Handbook, the position of the fuel selectors are to be checked three times prior to takeoff; Preflight Inspection, Cabin; Before Starting Engine; and Before Takeoff.

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Narrative	(Continued)
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The engine was run at the Pratt & Whitney Canada (PWC) facility in Bridgeport, West Virginia. According to the report from PWC party representative:

"....Engine start, acceleration to ground idle, acceleration to high power, deceleration and stabilization at flight idle, low idle, and shut down were normal. There were no unusual conditions or behavior observed from the engine during test...."

The pilot reported that he had 1,500 hours in make and model, all of it in the accident airplane. He had completed initial ground and flight training in the Cessna 208 on October 31, 2001. He last completed recurrent ground and simulator training on September 20, 2002.

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			00/10/2000											
AVIATION		Occui	Occurrence Type: Accident											
Landing Facility/Approach Infor	mation													
Airport Name			Airport IE	D: /	Airport Eleva	irport Elevation Runway Use			d Runway Length			Runv	vay Width	
Lorain County Regional Airport			LPR		7 93 Ft.	793 Ft. MSL NA								
Runway Surface Type: Dirt														
Runway Surface Condition: Wet														
Type Instrument Approach: NONE														
VFR Approach/Landing: Forced Land	gnik													
Aircraft Information														
Aircraft Manufacturer				del/Se	eries						Number			
Cessna			20)8B						208B	-0063			
Airworthiness Certificate(s): Normal														
Landing Gear Type: Tricycle														
Homebuilt Aircraft? No Nu	ımber of Seats: 2	2	Cert	Certified Max Gross Wt.				8750 LBS Numbe			er of Engines: 1			
Engine Type: Turbo Prop			_	Engine Manufacturer: Model/Serie Pratt & Whitney Canada PT6A-114										
- Aircraft Inspection Information														
Type of Last Inspection			Date of I	Date of Last Inspection Time Sir				nce Last Insp	Airfran	Airframe Total Time				
Continuous Airworthiness			04/17/	04/17/2003				69.2 Hours				12059 Hours		
- Emergency Locator Transmitter (ELT) Information													
ELT Installed? Yes	ELT Operate	ed? No		ELT Aided in Locating Accident Site? No										
Owner/Operator Information														
Registered Aircraft Owner			Stre	Street Address 282 Airport Road										
DK&L Company LLC			City	City							Stat	е	Zip Code	
			Anderson IN Street Address								ļ IIN		46017	
Operator of Aircraft			Same as Reg'd Aircraft Owner											
Same as Reg'd Aircraft Owner			City	City							Stat	е	Zip Code	
Operator Does Business As:	•				O	perator Desig	nator Co	ode: LK	LA					
- Type of U.S. Certificate(s) Held:														
Air Carrier Operating Certificate(s): Or	n-demand Air T	Гахі												
Operating Certificate: Operator Certificate:														
Regulation Flight Conducted Under: P	art 91: Genera	al Aviati	ion											
Type of Flight Operation Conducted: F	ositioning													
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AVIATION				Occurrence Type: Accident										
First Pilot	Information			•					•					
Name						City					State	. [Date of Birth	Age
On File						On Fil	ile				On F	ile	On File	32
Sex: M Seat Occupied: Left Principal Profession: Civilian Pilot										Cer	tificate	Numb	er: On File	•
Certificate(s): Airline Transport; Commercial; Private														
Airplane Ra	Airplane Rating(s): Multi-engine Land; Single-engine Land; Single-engine Sea													
Rotorcraft/Glider/LTA: None														
Instrument Rating(s): Airplane														
Instructor Rating(s): Airplane Multi-engine; Airplane Single-engine; Instrument Airplane														
Type Rating/Endorsement for Accident/Incident Aircraft? Current Biennial Flight Review? 12/09/2002														
Medical Ce	rt.: Class 1	Medica	al Cert. Status	s: Valid Me	dicalw/ wa	aivers/li	m.		D	ate of La	ast Med	lical Ex	kam: 04/09/20	003
- Flight Tim	e Matrix	All A/C This Make Airplane Airplane and Model Single Engine Mult-Engine		Nigh	Night A		Instrument simulated		Ro	otorcraft	Glider	Lighter Than Air		
Total Time		3500	1500											
Pilot In Con	nmand(PIC)													
Instructor														
Last 90 Day	/S		100						_					
Last 30 Day									_					
Last 24 Hou						<u> </u>						Τ.		
Seatbelt Us	sed? Yes	Shou	llder Harness	Used? Yes			Toxico	ology Pe	rforme	d? No		Se	cond Pilot? No)
Flight Pla	n/Itinerary													
	ht Plan Filed: IF	R												
Departure F							State	T.	Airport Identifier		er	Departure Time		Time Zone
Lorain							ОН		LPR			1703		EDT
Destination							State		Airport Identifier		r			
Anderson							IN			identine	,1			
Type of Cle	arance: IFR							-						
Type of Airs	space: Class	E												
Weather	Information													
Source of I		ord of briefi	ng											
Method of	Briefing: Unkno	wn												
				FACTUAL	REPORT	- AVIA	TION	٧						Page 3

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	Occurrence	Occurrence Type: Accident												
Weather	Information													
WOF ID	Observation Time	Time Zone	WOF Elevati	ion	WOF D	istance Fro	om Acci	dent Site	Direction From Accident Site					
. 55	4050		700 5											
LPR	1653	EDT	793 Ft.	MSL				4 NM		80 Deg.	Mag.			
Sky/Lowes	st Cloud Condition: Few					7500 Ft. A	\GL	Condition of Light: Day						
Lowest Ce	iling: None		Ft.	AGL	Visib	ility:	10	SM	Altir	timeter: 29.86 "				
Temperatu	ıre: 18 °C	Dew Point:	12 °C	Wind	Direction:	: 360			Der	nsity Altitude:	1392	Ft.		
Wind Spee	ed: 9	Gusts:		Weath	ner Condt	tions at Ac	cident S	ite: Visual C	Condi	tions				
Visibility (R	RVR): Ft.	Visibility (R	VV)	SM	Intensit	y of Precip	itation:							
Restriction	s to Visibility: None	•												
Type of Pre	ecipitation: None													
Accident	Information													
Aircraft Dar	mage:		Aircraft Fire	Aircraft Fire:					Aircraft Explosion					
Classificati	on:													
- Injury Su	mmary Matrix	Fatal Se	rious Mino	or	None	TOTAL								
First Pi	lot			1			1							
Second	d Pilot						7							
Studen	t Pilot						7							
Flight In	nstructor						7							
Check	Pilot						7							
Flight E	Engineer						┪							
	Attendants						┪							
Other C							┪							
Passen							\dashv							
- TOTAL A				1			1							
Other G				- 1			╣							
	O TOTAL -			1			1							
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National Transportation Safety Board

FACTUAL REPORT AVIATION

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Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

Robert L. Hancock

Additional Persons Participating in This Accident/Incident Investigation:

Jeffrey B Verco Aviation Safety Inspector Federal Aviation Administration Cleveland, OH

Tom Moody Air Safety Investigator Cessna Aircraft Co. Wichita, KS

Tom Berthe Air Safety Investigator Pratt & Whitney Canada Burlington, VT